Health Care Financing

RESEARCH BRIEF

These brief reports from the Office of Research, Office of Research and Demonstrations, provide program information on current health care issues.

They are based on data from the Medicare statistical files developed and maintained by the Bureau of Data Management and Strategy, Health Care Financing Administration.

Health Care Financing Administration
Office of Research & Demonstrations

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Medicare: Surgical Procedures in Short-Stay Hospitals, by Census Region, 1983

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The incidence of inpatient short-stay hospital surgery among the nation's aged population has increased substantially since the inception of the Medicare hospital insurance (HI) program. The rate of aged discharges with surgery increased from 85 per 1,000 enrollees in 1967 to 143 per 1,000 in 1983, a difference of 68 percent.

The increase in the use of surgery (especially elective or discretionary surgery) among the aged during this period probably reflects the following factors:

- Greater access to medical care and facilities.
- Medicare's retrospective cost-based hospital payment system which encouraged hospitals to render surgical services, because the more they spent the more they were reimbursed.
- Significant technical advances, improved techniques, and new equipment and materials which allowed surgeons to operate on aged patients for conditions formerly categorized as "inoperable."
- Aging of the aged population.

There has been considerable interest and concern during the past decade related to the appropriate use of inpatient surgery. The Subcommittee on Oversight and Investigation of the United States House of Representatives Committee on Interstate and Foreign Commerce published a report in 1977 which concluded that approximately 2.4 million unnecessary surgical procedures were performed in 1974 at a cost of about $4 billion to the American public. It also estimated that unnecessary surgery led to about 11,900 deaths in 1974. A recent report (March 1985) issued by the Senate Special Committee on Aging concluded that Medicare might save up to $1.2 billion a year by requiring that patients recommended for nine types of elective surgery receive a second opinion before having the operation. The nine surgical procedures cited were cardiac pacemaker, cataract, gall bladder, prostate, knee surgery, hysterectomy, back surgery, hernia repair, and hemorrhoidectomy.

Other studies have found large geographic variations in the incidence of surgery. These differentials raise a great many questions regarding the appropriate use of surgical services that cannot be addressed directly due to the lack of definitive data. For example, it is difficult to assess the extent to which differentials in utilization are the results of variation in access to care, individual physician practices, the incidence of conditions needing surgery, etc.

The purpose of this report is to present data on aged Medicare HI beneficiaries who incurred surgical services in short-stay hospitals. The report presents trend data for selected years (1967, 1972, 1977, 1981, and 1983) on the use of surgical procedures by census region (Table 1). The report also focuses on surgical rates (Table 2), cost (Table 3), average length of stay per discharge (Table 4), and mortality rates (Table 5) for the 25 most frequent surgical procedures in 1983 by census region. Attachment No. 1 presents a description of the major surgical classifications and the 25 leading surgical procedures in 1983. It is hoped this data will assist in identifying regional variations in surgery which might reflect the existence of aberrant surgical practices.

This report was prepared in the Division of Program Studies of the Office of Research. For additional information regarding this report, or for suggestions regarding future topics, call Charles Helbing at (301) 597-1420 or FTS 987-1420.

Selected Data Highlights

Table 1 - Trends in the Surgical Rate (1967, 1972, 1977, 1981, 1983)

- Between 1967 and 1983, the proportion of aged Medicare discharges with surgery increased from 32 percent to 37 percent. The surgical rate per 1,000 HI enrollees rose from 85 in 1967 to 143 in 1983 (an increase of 68 percent), reflecting the fact that the number of aged HI discharges with surgery increased at a faster rate than the total aged HI enrollment population (Figure 1).

- During this period, the increase in the surgical rate in the Northeast (74 percent) and North Central (67 percent) regions was similar to that for the nation (68 percent).

- The South region showed the largest increase (87 percent) in the surgical rate, going from 82 discharges per 1,000 enrollees in 1967 to 153 discharges per 1,000 enrollees in 1983.

- The West region, however, showed an increase (32 percent) in the surgical rate that was substantially less than the national rate. This reflects the fact that the West had the highest surgical rate among the regions in 1967 (95 discharges per 1,000 enrollees--12 percent above the national rate) and the lowest rate in 1983 (125 discharges per 1,000 enrollees--14 percent below the national rate).

Table 2 - Surgical Rates by Census Region, 1983

- In 1983, the number of aged Medicare discharges incurring an inpatient surgical procedure ranged from a low of 125 per 1,000 enrollees in the West region to a high of 153 per 1,000 enrollees in the South region, a difference of 22 percent.

- The five most frequent surgical procedures--diagnostic procedures on bladder, transurethral prostatectomy, intracapsular extraction of lens, other extracapsular extraction of lens, and cholecystectomy--accounted for approximately one-fifth of all aged Medicare discharges with surgery in short-stay hospitals during 1983.

- Surgical rates for some of the 25 leading procedures varied substantially among the census regions. For example, the surgical rate per 1,000 enrollees for diagnostic procedures on other intestine ranged from 1.5 in the West to 5.3 in the South, a difference of 253 percent. Similarly, the surgical rate for diagnostic procedures on the stomach ranged from 0.8 in the West to 2.3 in the South, a difference of 188 percent.

- In all regions but the West, the rank order position of the 25 leading surgical procedures was similar to that for the nation. The coefficient of rank correlation was 0.93 in the Northeast, 0.97 in the North Central region, and 0.96 in the South region. The coefficient of rank correlation in the West region, however, was only 0.76 (Unpublished data).

Table 3 - Hospital Charges by Census Region, 1983

- The average charge per discharge for aged Medicare beneficiaries with surgery discharged from short-stay hospitals in 1983 ranged from $5,787 in the South region to $7,323 in the Northeast region, a difference of 27 percent.

- Differences in the average charge per discharge among the census regions were substantial for some of the leading surgical procedures. For example, for diagnostic procedures on the lung and bronchus, the average charge per discharge ranged from $6,942 in the South to $10,857 in the Northeast, a difference of 56 percent.

Table 4 - Average Length of Stay by Census Region, 1983

- The average length-of-stay (ALOS) per discharge for aged Medicare beneficiaries with surgery ranged from 9.0 days in the West to 12.6 days in the Northeast, a difference of 3.6 days.

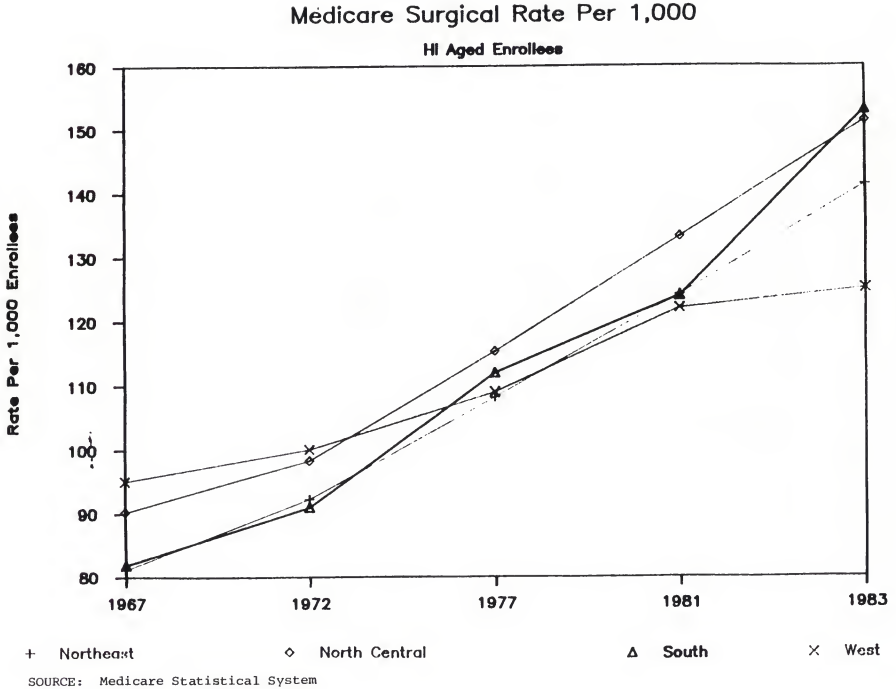
- Differences in the ALOS per discharge among the census regions were substantial for some of the leading surgical procedures. For example, for amputation of the lower limb, the ALOS ranged from 20.2 days in the West to 30.5 days in the Northeast, a difference of 10.3 days. Similarly, the ALOS for other arthroplasty of hip ranged from 14.9 days in the West to 23.2 days in the Northeast, a difference of 8.3 days.

Table 5 - Mortality Rates by Census Region, 1983

- In 1983, the inpatient mortality rate for all aged Medicare beneficiaries incurring an inpatient surgical procedure was 363 discharges per 10,000 procedures. By region, the mortality rate (per 10,000 procedures) ranged from 305 in the South to 491 in the Northeast, a difference of 61 percent.

- Among the leading surgical procedures, the highest mortality rate per 10,000 procedures was shown for amputation of the lower limb (819), diagnostic procedures on the lung and bronchus (734), and insertion of a cardiac pacemaker (643).

FIGURE 1



SOURCE: Medicare Statistical System

TABLE 1

NUMBER OF DISCHARGES WITH SURGERY AND THE SURGICAL RATE PER 1,000 HOSPITAL INSURANCE ENROLLEES FOR AGED MEDICARE BENEFICIARIES DISCHARGED FROM SHORT-STAY HOSPITALS, FOR SELECTED YEARS: 1967, 1972, 1977, 1981, AND 1983

CENSUS REGION	1967		1972		1977		1981		1983	
	NUMBER OF DISCHARGES IN THOUSANDS	SURGICAL RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	SURGICAL RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	SURGICAL RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	SURGICAL RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	SURGICAL RATE PER 1,000 ENROLLEES
ALL AREAS 1/	1,662	85	1,971	93	2,573	110	3,171	124	3,810	143
NORTHEAST	413	81	485	92	609	108	743	124	872	141
NORTH CENTRAL	508	90	572	98	719	115	887	133	1,045	151
SOUTH	456	82	578	91	817	112	1,008	124	1,311	153
WEST	276	95	323	100	411	109	517	122	563	125

1/ INCLUDES OUTLYING AREAS AND UNKNOWN RESIDENCE NOT SHOWN SEPERATELY.

TABLE 2

NUMBER OF DISCHARGES WITH SURGERY AND SURGICAL RATES PER 1,000 HOSPITAL INSURANCE ENROLLEES FOR AGED MEDICARE BENEFICIARIES DISCHARGED FROM SHORT-STAY HOSPITALS, BY SURGICAL PROCEDURE AND CENSUS REGION: 1983

SURGICAL PROCEDURE 1/	ALL REGIONS 2/		NORTHEAST		NORTH CENTRAL		SOUTH		WEST	
	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES
TOTAL, ALL PROCEDURES	3,010	142.0	872	141.0	1,046	151.3	1,311	153.3	563	125.2
OPERATIONS ON THE NERVOUS SYSTEM	79	3.0	18	2.9	21	3.0	26	3.1	14	3.0
OPERATIONS ON THE ENDOCRINE SYSTEM	13	0.5	2	0.4	4	0.5	5	0.5	2	0.4
OPERATIONS ON THE EYE	532	19.9	120	19.3	139	20.1	186	21.7	84	18.8
INTRACAPSULAR EXTRACTION OF LENS	169	6.3	52	8.4	47	6.8	49	5.7	20	4.4
OTHER EXTRACAPSULAR EXTRACTION OF LENS	158	5.9	26	4.2	43	6.2	65	7.6	24	5.4
INSERTION OF PROSTHETIC LENS (PSEUDOPHAKOS)	74	2.8	14	2.3	18	2.6	23	2.6	19	4.3
RESIDUAL	130	4.9	28	4.5	31	4.5	50	5.8	21	4.7
OPERATIONS ON THE EAR	14	0.5	3	0.5	4	0.5	5	0.5	3	0.7
OPERATIONS ON THE NOSE, MOUTH, AND PHARYNX	54	2.0	13	2.2	14	2.0	19	2.3	7	1.6
OPERATIONS ON THE RESPIRATORY SYSTEM	149	5.6	36	5.9	37	5.3	57	6.7	19	4.2
DIAGNOSTIC PROCEDURES ON LUNG AND BRONCHUS	75	2.8	17	2.8	19	2.7	31	3.6	8	1.8
RESIDUAL	75	2.8	19	3.1	18	2.6	26	3.1	11	2.4

SEE FOOTNOTES AT END OF TABLE

TABLE 2 (CONTINUED)

NUMBER OF DISCHARGES WITH SURGERY AND SURGICAL RATES PER 1,000 HOSPITAL INSURANCE ENROLLEES FOR AGED MEDICARE BENEFICIARIES DISCHARGED FROM SHORT-STAY HOSPITALS, BY SURGICAL PROCEDURE AND CENSUS REGION: 1983

SURGICAL PROCEDURE 1/	ALL REGIONS 2/		NORTHEAST		NORTH CENTRAL		SOUTH		WEST	
	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES
OPERATIONS ON THE CARDIOVASCULAR SYSTEM	357	13.4	80	13.0	88	12.8	122	14.2	66	14.6
BYPASS ANASTOMOSIS FOR HEART REVASCULARIZATION	48	1.8	9	1.5	13	1.8	16	1.9	11	2.4
DIAGNOSTIC PROCEDURES ON HEART AND PERICARDIUM	36	1.4	7	1.2	9	1.2	14	1.7	6	1.3
INSERTION OF CARDIAC PACEMAKER SYSTEM	70	2.6	18	2.9	17	2.5	24	2.8	11	2.4
ENDARTERECTOMY	51	1.9	9	1.4	13	1.9	18	2.1	12	2.6
OTHER SHUNT OR VASCULAR BYPASS	39	1.5	10	1.6	9	1.3	13	1.5	7	1.5
RESIDUAL	113	4.2	27	4.4	28	4.1	37	4.3	20	4.5
OPERATIONS ON THE HEMIC AND LYMPHATIC SYSTEM	45	1.7	11	1.8	11	1.5	18	2.1	5	1.2
OPERATIONS ON THE DIGESTIVE SYSTEM	841	31.5	201	32.5	222	32.2	302	35.3	112	24.8
DIAGNOSTIC PROCEDURES ON STOMACH	50	1.9	13	2.1	14	2.0	20	2.3	4	0.8
DIAGNOSTIC PROCEDURES ON SMALL INTESTINE	66	2.5	13	2.1	16	2.3	30	3.5	6	1.3
DIAGNOSTIC PROCEDURES ON OTHER INTESTINE	106	4.0	27	4.4	27	3.9	45	5.3	7	1.5
PARTIAL EXCISION OF LARGE INTESTINE	68	2.6	18	2.9	18	2.6	20	2.4	12	2.6
CHOLECYSTECTOMY	109	4.1	23	3.8	29	4.2	39	4.5	16	3.7
UNILATERAL REPAIR OF INGUINAL HERNIA	93	3.5	24	3.9	24	3.4	28	3.3	16	3.6
RESIDUAL	350	13.1	83	13.4	95	13.8	120	14.0	51	11.3

SEE FOOTNOTES AT END OF TABLE

TABLE 2 (CONTINUED)

NUMBER OF DISCHARGES WITH SURGERY AND SURGICAL RATES PER 1,000 HOSPITAL INSURANCE ENROLLEES FOR AGED MEDICARE BENEFICIARIES DISCHARGED FROM SHORT-STAY HOSPITALS, BY SURGICAL PROCEDURE AND CENSUS REGION: 1983

SURGICAL PROCEDURE 1/	ALL REGIONS 2/		NORTHEAST		NORTH CENTRAL		SOUTH		WEST	
	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES
OPERATIONS ON THE URINARY SYSTEM	320	12.0	74	12.0	91	13.2	115	13.4	38	8.4
DIAGNOSTIC PROCEDURES ON BLADDER	176	6.6	38	6.2	54	7.8	67	7.8	16	3.5
TRANSURETHRAL EXCISION OR DESTRUCTION OF BLADDER TISSUE	51	1.9	15	2.4	12	1.8	15	1.8	8	1.8
RESIDUAL	93	3.5	21	3.4	25	3.6	33	3.9	14	3.0
OPERATIONS ON THE MALE GENITAL ORGANS	243	9.1	55	9.0	61	8.9	80	9.4	44	9.7
TRANSURETHRAL PROSTATECTOMY	174	6.5	39	6.3	44	6.4	57	6.6	33	7.2
RESIDUAL	69	2.6	17	2.7	17	2.5	24	2.8	11	2.5
OPERATIONS ON THE FEMALE GENITAL ORGANS	104	3.9	24	3.9	28	4.0	35	4.1	16	3.6
OBSTETRICAL PROCEDURES	1	0.0	0	0.0	0	0.0	0	0.0	0	0.1
OPERATIONS ON THE MUSCULOSKELETAL SYSTEM	491	18.4	104	16.8	137	19.8	158	18.5	91	20.2
OPEN REDUCTION OF FRACTURE WITH INTERNAL FIXATION	104	3.9	23	3.8	26	3.8	35	4.1	19	4.3
ARTHROPLASTY OF KNEE AND ANKLE	37	1.4	6	1.0	13	1.8	11	1.2	7	1.6
TOTAL HIP REPLACEMENT	46	1.7	9	1.5	13	1.9	13	1.5	10	2.2
OTHER ARTHROPLASTY OF HIP	53	2.0	11	1.7	14	2.1	18	2.1	10	2.2
AMPUTATION OF LOWER LIMB	40	1.5	9	1.5	10	1.4	15	1.8	5	1.1
RESIDUAL	212	7.9	45	7.3	61	8.8	66	7.7	39	8.8

SEE FOOTNOTES AT END OF TABLE

TABLE 2 (CONTINUED)

NUMBER OF DISCHARGES WITH SURGERY AND SURGICAL RATES PER 1,000 HOSPITAL INSURANCE ENROLLEES FOR AGED MEDICARE BENEFICIARIES DISCHARGED FROM SHORT-STAY HOSPITALS, BY SURGICAL PROCEDURE AND CENSUS REGION: 1983

SURGICAL PROCEDURE 1/	ALL REGIONS 2/		NORTHEAST		NORTH CENTRAL		SOUTH		WEST	
	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES	NUMBER OF DISCHARGES IN THOUSANDS	RATE PER 1,000 ENROLLEES
OPERATIONS ON THE INTEGUMENTARY SYSTEM	165	6.2	39	6.3	44	6.3	59	7.0	22	5.0
MASTECTOMY	36	1.4	9	1.4	10	1.5	11	1.3	6	1.4
RESIDUAL	129	4.8	30	4.8	34	4.9	49	5.7	16	3.5
MISCELLANEOUS DIAGNOSTIC AND THERAPEUTIC PROCEDURES	236	8.8	73	11.9	52	7.6	83	9.7	26	5.8
ARTERIOGRAPHY USING CONTRAST MATERIAL	33	1.2	5	0.8	10	1.4	13	1.5	5	1.1
RESIDUAL	203	7.6	69	11.1	42	6.2	70	8.2	21	4.7
CODES UNKNOWN	164	6.2	16	2.6	93	13.5	40	4.7	14	3.0

1/ THE CLASSIFICATION CODES FOR THE LEADING SURGICAL PROCEDURES SHOWN IN THIS REPORT WERE DERIVED FROM THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION AND ARE PRESENTED IN ATTACHMENT 1.
2/ INCLUDES PUERTO RICO, VIRGIN ISLANDS, GUAM, AMERICAN SOMOA, AND FOREIGN COUNTRIES NOT SHOWN SEPERATELY.

TABLE 3

TOTAL CHARGES AND AVERAGE CHARGE PER DISCHARGE FOR AGED MEDICARE BENEFICIARIES WITH SURGERY DISCHARGED FROM SHORT-STAY HOSPITALS, BY SURGICAL PROCEDURE AND CENSUS REGION: 1983

SURGICAL PROCEDURE 1/	ALL REGIONS 2/		NORTHEAST		NORTH CENTRAL		SOUTH		WEST	
	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE
TOTAL, ALL PROCEDURES	$24,340	$6,389	$6,806	$6,753	$6,684	$6,398	$7,588	$5,787	$4,123	$7,323
OPERATIONS ON THE NERVOUS SYSTEM	648	8,200	156	8,672	173	8,313	191	7,242	127	9,269
OPERATIONS ON THE ENDOCRINE SYSTEM	69	5,449	15	6,020	19	5,322	24	5,315	11	5,411
OPERATIONS ON THE EYE	1,238	2,328	284	2,372	326	2,352	409	2,202	215	2,648
INTRACAPSULAR EXTRACTION OF LENS	367	2,167	110	2,109	106	2,261	101	2,079	48	2,417
OTHER EXTRACAPSULAR EXTRACTION OF LENS	368	2,324	60	2,335	102	2,370	146	2,238	60	2,470
INSERTION OF PROSTHETIC LENS (PSEUDOPHAKOS)	170	2,303	32	2,300	40	2,237	49	2,155	49	2,561
RESIDUAL	334	2,667	82	2,932	78	2,534	114	2,296	58	2,757
OPERATIONS ON THE EAR	45	3,129	9	3,039	11	2,935	12	2,596	13	4,264
OPERATIONS ON THE NOSE, MOUTH, AND PHARYNX	178	3,272	47	3,447	46	3,308	58	2,978	27	3,716
OPERATIONS ON THE RESPIRATORY SYSTEM	1,571	10,538	394	10,854	399	10,919	520	9,124	256	13,590
DIAGNOSTIC PROCEDURES ON LUNG AND BRONCHUS	595	7,990	144	8,317	152	8,191	212	6,942	87	10,857
RESIDUAL	976	13,083	250	13,177	248	13,721	308	11,644	169	15,610

SEE FOOTNOTES AT END OF TABLE

TABLE 3 (CONTINUED)

TOTAL CHARGES AND AVERAGE CHARGE PER DISCHARGE FOR AGED MEDICARE BENEFICIARIES WITH SURGERY DISCHARGED FROM SHORT-STAY HOSPITALS, BY SURGICAL PROCEDURE AND CENSUS REGION: 1983

SURGICAL PROCEDURE 1/	ALL REGIONS 2/		NORTHEAST		NORTH CENTRAL		SOUTH		WEST	
	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE
OPERATIONS ON THE CARDIOVASCULAR SYSTEM	4,508	12,623	1,021	12,742	1,144	12,941	1,393	11,455	941	14,275
BYPASS ANASTOMOSIS FOR HEART REVASCULARIZATION	1,024	21,252	200	22,143	263	20,973	313	19,710	246	23,190
DIAGNOSTIC PROCEDURES ON HEART AND PERICARDIUM	219	6,066	39	5,267	58	6,756	76	5,269	46	8,092
INSERTION OF CARDIAC PACEMAKER SYSTEM	869	12,474	221	12,501	216	12,667	286	12,041	144	13,249
ENDARTERECTOMY	398	7,800	72	8,221	105	8,181	126	7,159	94	8,038
OTHER SHUNT OR VASCULAR BYPASS	488	12,456	128	12,593	117	12,933	144	11,144	97	14,136
RESIDUAL	1,610	13,365	361	13,318	385	13,503	448	12,110	313	15,534
OPERATIONS ON THE HEMIC AND LYMPHATIC SYSTEM	286	6,342	78	6,923	73	6,876	97	5,464	37	7,018
OPERATIONS ON THE DIGESTIVE SYSTEM	5,992	7,123	1,530	7,606	1,590	7,148	1,923	6,366	935	8,384
DIAGNOSTIC PROCEDURES ON STOMACH	271	5,417	77	5,982	77	5,568	92	4,680	25	6,949
DIAGNOSTIC PROCEDURES ON SMALL INTESTINE	354	5,387	75	5,717	95	5,903	141	4,640	42	7,083
DIAGNOSTIC PROCEDURES ON OTHER INTESTINE	475	4,484	141	5,179	123	4,563	173	3,858	37	5,632
PARTIAL EXCISION OF LARGE INTESTINE	783	11,478	214	11,982	202	11,359	226	11,044	139	11,794
CHOLECYSTECTOMY	792	7,296	179	7,687	209	7,154	273	7,029	129	7,806
UNILATERAL REPAIR OF INGUINAL HERNIA	267	2,777	70	2,938	70	2,983	74	2,628	41	2,542
RESIDUAL	3,060	8,738	774	9,339	813	8,665	944	7,887	522	10,256

SEE FOOTNOTES AT END OF TABLE

TABLE 3 (CONTINUED)

TOTAL CHARGES AND AVERAGE CHARGE PER DISCHARGE FOR AGED MEDICARE BENEFICIARIES WITH SURGERY DISCHARGED FROM SHORT-STAY HOSPITALS, BY SURGICAL PROCEDURE AND CENSUS REGION: 1983

SURGICAL PROCEDURE 1/	ALL REGIONS 2/		NORTHEAST		NORTH CENTRAL		SOUTH		WEST	
	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE
OPERATIONS ON THE URINARY SYSTEM	1,500	4,688	375	5,045	429	4,703	495	4,311	197	5,201
DIAGNOSTIC PROCEDURES ON BLADDER	776	4,407	189	4,910	239	4,408	263	3,946	83	5,232
TRANSURETHRAL EXCISION OR DESTRUCTION OF BLADDER TISSUE	170	3,342	54	3,633	41	3,368	48	3,149	26	3,179
RESIDUAL	554	5,951	132	6,305	149	5,998	184	5,582	87	6,385
OPERATIONS ON THE MALE GENITAL ORGANS	1,075	4,424	272	4,903	275	4,506	337	4,188	186	4,257
TRANSURETHRAL PROSTATECTOMY	779	4,402	194	4,990	204	4,628	242	4,267	136	4,169
RESIDUAL	297	4,279	78	4,699	72	4,192	95	3,997	51	4,510
OPERATIONS ON THE FEMALE GENITAL ORGANS	414	3,972	102	4,242	114	4,107	126	3,694	70	4,282
OBSTETRICAL PROCEDURES	9	7,323	3	12,103	2	8,579	3	6,185	2	5,090
OPERATIONS ON THE MUSCULOSKELETAL SYSTEM	3,708	7,548	863	8,317	1,015	7,417	1,106	6,994	716	7,894
OPEN REDUCTION OF FRACTURE WITH INTERNAL FIXATION	830	7,991	207	8,873	200	7,655	262	7,471	161	8,364
ARTHROPLASTY OF KNEE AND ANKLE	377	10,146	72	11,179	124	9,926	103	9,701	76	10,319
TOTAL HIP REPLACEMENT	481	10,575	106	11,531	138	10,273	126	9,897	111	10,973
OTHER ARTHROPLASTY OF HIP	473	8,937	106	10,023	123	8,710	148	8,109	95	9,688
AMPUTATION OF LOWER LIMB	436	10,942	121	12,954	107	10,936	145	9,439	61	12,505
RESIDUAL	1,111	5,240	251	5,593	323	5,302	321	4,865	213	5,410

SEE FOOTNOTES AT END OF TABLE

TABLE 3 (CONTINUED)

TOTAL CHARGES AND AVERAGE CHARGE PER DISCHARGE FOR AGED MEDICARE BENEFICIARIES WITH SURGERY DISCHARGED FROM SHORT-STAY HOSPITALS, BY SURGICAL PROCEDURE AND CENSUS REGION: 1983

SURGICAL PROCEDURE 1/	ALL REGIONS 2/		NORTHEAST		NORTH CENTRAL		SOUTH		WEST	
	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE	TOTAL CHARGES IN MILLIONS	AVERAGE CHARGE PER DISCHARGE
OPERATIONS ON THE INTEGUMENTARY SYSTEM	873	5,203	224	5,777	237	5,442	273	4,586	136	6,082
MASTECTOMY	162	4,448	43	4,852	45	4,492	46	4,212	27	4,262
RESIDUAL	711	5,519	181	6,052	192	5,728	227	4,670	109	6,810
MISCELLANEOUS DIAGNOSTIC AND THERAPEUTIC PROCEDURES	1,266	5,370	401	5,458	303	5,808	399	4,790	160	6,133
ARTERIOGRAPHY USING CONTRAST MATERIAL	170	5,223	24	5,145	55	5,683	62	4,823	28	5,448
RESIDUAL	1,096	5,393	376	5,480	248	5,837	337	4,784	132	6,302
CODES UNKNOWN	961	5,849	113	6,961	528	5,660	223	5,521	95	6,946

1/ THE CLASSIFICATION CODES FOR THE LEADING SURGICAL PROCEDURES SHOWN IN THIS REPORT WERE DERIVED FROM THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION AND ARE PRESENTED IN ATTACHMENT 1.
2/ INCLUDES PUERTO RICO, VIRGIN ISLANDS, GUAM, AMERICAN SAMOA, AND FOREIGN COUNTRIES.

TABLE 4

TOTAL DAYS OF CARE AND AVERAGE LENGTH OF STAY PER DISCHARGE FOR AGED MEDICARE BENEFICIARIES WITH SURGERY DISCHARGED FROM SHORT-STAY HOSPITALS, BY SURGICAL PROCEDURE AND CENSUS REGION: 1983

SURGICAL PROCEDURE 1/	ALL REGIONS 2/		NORTHEAST		NORTH CENTRAL		SOUTH		WEST	
	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY
TOTAL, ALL PROCEDURES	41,543	10.9	11,018	12.6	11,653	11.2	13,633	10.4	5,057	9.0
OPERATIONS ON THE NERVOUS SYSTEM	1,151	14.6	297	16.5	309	14.9	367	14.0	172	12.6
OPERATIONS ON THE ENDOCRINE SYSTEM	115	9.1	24	9.8	34	9.5	43	9.5	13	6.8
OPERATIONS ON THE EYE	1,843	2.9	399	3.3	411	3.0	521	2.8	201	2.4
INTRACAPSULAR EXTRACTION OF LENS	499	2.9	166	3.2	142	3.0	137	2.8	47	2.3
OTHER EXTRACAPSULAR EXTRACTION OF LENS	394	2.6	71	2.8	110	2.6	161	2.5	50	2.1
INSERTION OF PROSTHETIC LENS (PSEUDOPHAKOS)	183	2.6	37	2.7	48	2.7	56	2.6	41	2.1
RESIDUAL	467	3.6	124	4.4	110	3.6	166	3.3	63	3.0
OPERATIONS ON THE EAR	75	5.2	17	5.9	19	5.2	22	4.8	17	5.3
OPERATIONS ON THE NOSE, MOUTH, AND PHARYNX	332	6.1	91	6.8	89	6.3	115	5.9	36	4.9
OPERATIONS ON THE RESPIRATORY SYSTEM	2,320	15.6	663	18.2	587	16.1	811	14.2	253	13.5
DIAGNOSTIC PROCEDURES ON LUNG AND BRONCHUS	1,043	14.0	280	16.1	269	14.5	395	12.9	98	12.3
RESIDUAL	1,277	17.1	383	20.2	319	17.7	416	15.7	155	14.3

SEE FOOTNOTES AT END OF TABLE

TABLE 4 (CONTINUED)

TOTAL DAYS OF CARE AND AVERAGE LENGTH OF STAY PER DISCHARGE FOR AGED MEDICARE BENEFICIARIES WITH SURGERY DISCHARGED FROM SHORT-STAY HOSPITALS, BY SURGICAL PROCEDURE AND CENSUS REGION: 1983

SURGICAL PROCEDURE 1/	ALL REGIONS 2/		NORTHEAST		NORTH CENTRAL		SOUTH		WEST	
	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY
OPERATIONS ON THE CARDIOVASCULAR SYSTEM	4,822	13.6	1,230	15.4	1,248	14.1	1,587	13.1	733	11.1
BYPASS ANASTOMOSIS FOR HEART REVASCULARIZATION	766	15.9	161	17.8	208	16.6	251	15.8	144	13.6
DIAGNOSTIC PROCEDURES ON HEART AND PERICARDIUM	265	7.4	55	7.5	69	8.1	104	7.2	36	6.4
INSERTION OF CARDIAC PACEMAKER SYSTEM	R41	12.1	253	14.3	211	12.3	275	11.6	98	9.0
ENDARTERECTOMY	599	11.7	121	13.8	164	12.7	211	11.9	102	8.8
OTHER SHUNT OR VASCULAR BYPASS	702	17.9	208	20.4	167	18.4	225	17.4	100	14.6
RESIDUAL	1,648	14.6	440	16.2	429	15.1	522	14.1	252	12.5
OPERATIONS ON THE HEMIC AND LYMPHATIC SYSTEM	553	12.3	164	14.6	137	12.9	196	11.0	53	9.9
OPERATIONS ON THE DIGESTIVE SYSTEM	10,734	12.8	2,948	14.7	2,896	13.0	3,623	12.0	1,220	10.9
DIAGNOSTIC PROCEDURES ON STOMACH	585	11.7	175	13.5	165	11.9	205	10.5	38	10.5
DIAGNOSTIC PROCEDURES ON SMALL INTESTINE	727	11.1	168	12.8	189	11.7	309	10.2	59	9.9
DIAGNOSTIC PROCEDURES ON OTHER INTESTINE	1,078	10.2	337	12.4	273	10.1	407	9.0	60	9.1
PARTIAL EXCISION OF LARGE INTESTINE	1,257	18.4	372	20.8	333	18.7	374	18.2	173	14.7
CHOLECYSTECTOMY	1,452	13.4	349	15.0	397	13.6	518	13.3	179	10.8
UNILATERAL REPAIR OF INGUINAL HERNIA	548	5.9	152	6.3	151	6.4	174	6.2	68	4.2
RESIDUAL	5,087	14.5	1,395	16.8	1,387	14.6	1,637	13.7	643	12.6

SEE FOOTNOTES AT END OF TABLE

TABLE 4 (CONTINUED)

TOTAL DAYS OF CARE AND AVERAGE LENGTH OF STAY PER DISCHARGE FOR AGED MEDICARE BENEFICIARIES WITH SURGERY DISCHARGED FROM SHORT-STAY HOSPITALS, BY SURGICAL PROCEDURE AND CENSUS REGION: 1983

SURGICAL PROCEDURE 1/	ALL REGIONS 2/		NORTHEAST		NORTH CENTRAL		SOUTH		WEST	
	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY
OPERATIONS ON THE URINARY SYSTEM	3,090	9.7	816	11.0	899	9.9	1,069	9.3	298	7.9
DIAGNOSTIC PROCEDURES ON BLADDER	1,695	9.6	428	11.1	525	9.7	604	9.1	130	8.2
TRANSURETHRAL EXCISION OR DESTRUCTION OF BLADDER TISSUE	339	6.7	116	7.7	83	6.9	97	6.4	41	5.0
RESIDUAL	1,064	11.4	273	13.0	290	11.7	367	11.1	127	9.2
OPERATIONS ON THE MALE GENITAL ORGANS	2,258	9.3	608	11.0	597	9.8	736	9.2	297	6.8
TRANSURETHRAL PROSTATECTOMY	1,664	9.6	438	11.3	449	10.2	539	9.5	224	6.9
RESIDUAL	594	8.6	171	10.3	148	8.6	197	8.3	73	6.5
OPERATIONS ON THE FEMALE GENITAL ORGANS	864	8.3	216	9.0	244	8.8	284	8.1	114	7.0
OBSTETRICAL PROCEDURES	14	12.0	4	19.0	3	12.7	4	10.5	3	9.1
OPERATIONS ON THE MUSCULOSKELETAL SYSTEM	7,483	15.2	1,904	18.3	2,082	15.2	2,377	15.0	1,092	12.0
OPEN REDUCTION OF FRACTURE WITH INTERNAL FIXATION	1,709	17.2	495	21.3	442	16.9	585	16.7	263	13.7
ARTHROPLASTY OF KNEE AND ANKLE	625	16.8	125	19.4	215	17.2	182	17.1	100	13.6
TOTAL HIP REPLACEMENT	804	17.7	189	20.5	240	17.8	227	17.8	148	14.6
OTHER ARTHROPLASTY OF HIP	987	18.6	245	23.2	266	18.8	327	17.9	145	14.9
AMPUTATION OF LOWER LIMB	961	24.1	285	30.5	234	24.0	335	21.7	98	20.2
RESIDUAL	2,317	10.9	566	12.6	685	11.3	721	10.9	330	8.6

SEE FOOTNOTES AT END OF TABLE

TABLE 4 (CONTINUED)

TOTAL DAYS OF CARE AND AVERAGE LENGTH OF STAY PER DISCHARGE FOR AGED MEDICARE BENEFICIARIES WITH SURGERY DISCHARGED FROM SHORT-STAY HOSPITALS, BY SURGICAL PROCEDURE AND CENSUS REGION: 1983

SURGICAL PROCEDURE 1/	ALL REGIONS 2/		NORTHEAST		NORTH CENTRAL		SOUTH		WEST	
	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY	TOTAL DAYS OF CARE IN THOUSANDS	AVERAGE LENGTH OF STAY
OPERATIONS ON THE INTEGUMENTARY SYSTEM	1,901	11.5	525	13.5	517	11.6	635	10.7	215	9.7
MASTECTOMY	346	9.5	94	10.6	99	9.8	107	9.8	45	7.1
RESIDUAL	1,554	12.1	431	14.4	418	12.5	527	10.9	170	10.7
MISCELLANEOUS DIAGNOSTIC AND THERAPEUTIC PROCEDURES	2,508	10.6	891	12.1	570	10.9	817	9.8	223	8.5
ARTERIOGRAPHY USING CONTRAST MATERIAL	303	9.3	49	10.4	100	10.3	116	9.1	36	6.9
RESIDUAL	2,205	10.9	841	12.2	470	11.1	700	9.9	188	8.9
CODES UNKNOWN	1,772	10.8	219	13.1	1,012	10.9	426	10.5	116	8.5

1/ THE CLASSIFICATION CODES FOR THE LEADING SURGICAL PROCEDURES SHOWN IN THIS REPORT WERE DERIVED FROM THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION AND ARE PRESENTED IN ATTACHMENT 1.
2/ INCLUDES PUERTO RICO, VIRGIN ISLANDS, GUAM, AMERICAN SAMOA, AND FOREIGN COUNTRIES.

TABLE 5

NUMBER OF DISCHARGES WITH SURGERY WHO DIED AND MORTALITY RATE PER 10,000 PROCEDURES, FOR AGED MEDICARE BENEFICIARIES DISCHARGED FROM SHORT-STAY HOSPITALS, BY SURGICAL PROCEDURE AND CENSUS REGION: 1983

SURGICAL PROCEDURE 1/	ALL REGIONS 2/		NORTHEAST		NORTH CENTRAL		SOUTH		WEST	
	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES
TOTAL, ALL PROCEDURES	138.4	363	42.8	491	37.6	360	40.1	305	17.5	311
OPERATIONS ON THE NERVOUS SYSTEM	5.4	601	1.8	984	1.2	587	1.6	591	0.8	599
OPERATIONS ON THE ENDOCRINE SYSTEM	0.2	131	3/	121	0.1	181	0.1	111	3/	102
OPERATIONS ON THE EYE	0.6	11	0.2	16	0.2	12	0.2	8	0.1	9
INTRACAPSULAR EXTRACTION OF LENS	0.1	8	3/	9	0.1	13	3/	6	0.0	0
OTHER EXTRACAPSULAR EXTRACTION OF LENS	0.1	5	3/	2	3/	6	3/	5	3/	6
INSERTION OF PROSTHETIC LENS (PSEUDOPHAKOS)	0.1	9	3/	7	3/	3	3/	9	3/	16
RESIDUAL	0.3	23	0.1	47	0.1	23	0.1	14	3/	17
OPERATIONS ON THE EAR	0.1	66	3/	71	3/	108	3/	43	3/	48
OPERATIONS ON THE NOSE, MOUTH, AND PHARYNX	0.4	79	0.2	130	0.1	68	0.1	46	0.1	89
OPERATIONS ON THE RESPIRATORY SYSTEM	14.8	995	4.8	1,308	3.6	972	4.7	829	1.8	942
DIAGNOSTIC PROCEDURES ON LUNG AND BRONCHUS	5.5	734	1.7	979	1.3	723	1.8	585	0.6	800
RESIDUAL	9.4	1,256	3.1	1,608	2.2	1,227	2.9	1,110	1.1	1,048

SEE FOOTNOTES AT END OF TABLE

TABLE 5 (CONTINUED)

NUMBER OF DISCHARGES WITH SURGERY WHO DIED AND MORTALITY RATE PER 10,000 PROCEDURES, FOR AGED MEDICARE BENEFICIARIES DISCHARGED FROM SHORT-STAY HOSPITALS, BY SURGICAL PROCEDURE AND CENSUS REGION: 1983

SURGICAL PROCEDURE 1/	ALL REGIONS 2/		NORTHEAST		NORTH CENTRAL		SOUTH		WEST	
	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES
OPERATIONS ON THE CARDIOVASCULAR SYSTEM	24.8	694	7.5	929	6.2	697	6.9	568	4.2	634
BYPASS ANASTOMOSIS FOR HEART REVASCULARIZATION	2.4	491	0.5	591	0.6	507	0.7	435	0.5	475
DIAGNOSTIC PROCEDURES ON HEART AND PERICARDIUM	0.9	258	0.2	257	0.2	229	0.3	225	0.2	386
INSERTION OF CARDIAC PACEMAKER SYSTEM	4.5	643	1.7	942	1.0	606	1.4	569	0.4	383
ENDARTERECTOMY	1.3	246	0.3	302	0.4	287	0.3	178	0.3	257
OTHER SHUNT OR VASCULAR BYPASS	2.2	564	0.8	750	0.5	598	0.5	379	0.4	580
RESIDUAL	13.5	1,198	4.0	1,489	3.4	1,195	3.7	1,010	2.3	1,158
OPERATIONS ON THE HEMIC AND LYMPHATIC SYSTEM	2.5	560	0.7	664	0.6	531	1.0	535	0.3	478
OPERATIONS ON THE DIGESTIVE SYSTEM	39.5	469	12.3	611	10.3	461	11.5	380	5.3	476
DIAGNOSTIC PROCEDURES ON STOMACH	2.0	389	0.7	507	0.6	413	0.5	271	0.2	541
DIAGNOSTIC PROCEDURES ON SMALL INTESTINE	2.5	378	0.7	496	0.7	414	0.9	309	0.2	369
DIAGNOSTIC PROCEDURES ON OTHER INTESTINE	2.1	203	0.8	303	0.5	180	0.7	148	0.2	258
PARTIAL EXCISION OF LARGE INTESTINE	4.1	595	1.3	719	1.0	562	1.1	542	0.7	553
CHOLECYSTECTOMY	2.6	243	0.8	325	0.7	235	0.8	215	0.4	212
UNILATERAL REPAIR OF INGUINAL HERNIA	0.4	42	0.2	71	0.1	40	0.1	35	3/	15
RESIDUAL	25.8	737	8.0	960	6.8	711	7.3	611	3.7	728

SEE FOOTNOTES AT END OF TABLE

TABLE 8 (CONTINUED)

NUMBER OF DISCHARGES WITH SURGERY WHO DIED AND MORTALITY RATE PER 10,000 PROCEDURES, FOR AGED MEDICARE BENEFICIARIES DISCHARGED FROM SHORT-STAY HOSPITALS, BY SURGICAL PROCEDURE AND CENSUS REGION: 1983

SURGICAL PROCEDURE 1/	ALL REGIONS 2/		NORTHEAST		NORTH CENTRAL		SOUTH		WEST	
	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES
OPERATIONS ON THE URINARY SYSTEM	5.5	173	1.8	241	1.5	166	1.6	142	0.6	149
DIAGNOSTIC PROCEDURES ON BLADDER	2.7	155	0.9	224	0.8	144	0.9	120	0.2	136
TRANSURETHRAL EXCISION OR DESTRUCTION OF BLADDER TISSUE	0.5	100	0.2	117	0.1	115	0.1	73	0.1	103
RESIDUAL	2.3	247	0.8	364	0.6	238	0.7	201	0.3	194
OPERATIONS ON THE MALE GENITAL ORGANS	2.0	82	0.6	111	0.5	75	0.7	81	0.3	62
TRANSURETHRAL PROSTATECTOMY	1.3	77	0.4	99	0.3	72	0.5	79	0.2	57
RESIDUAL	0.7	96	0.2	139	0.1	85	0.2	84	0.1	76
OPERATIONS ON THE FEMALE GENITAL ORGANS	0.7	70	0.2	96	0.2	88	0.1	40	0.1	67
OBSTETRICAL PROCEDURES	3/	214	3/	714	3/	500	0.0	0	0.0	0
OPERATIONS ON THE MUSCULOSKETAL SYSTEM	13.2	269	3.9	372	3.6	262	4.0	254	1.7	187
OPEN REDUCTION OF FRACTURE WITH INTERNAL FIXATION	4.0	382	1.3	552	1.0	372	1.2	340	0.5	268
ARTHROPLASTY OF KNEE AND ANKLE	0.2	57	3/	62	0.1	56	0.1	52	3/	61
TOTAL HIP REPLACEMENT	0.7	147	0.2	228	0.2	153	0.1	114	0.1	109
OTHER ARTHROPLASTY OF HIP	2.0	378	0.5	483	0.6	427	0.6	320	0.3	302
AMPUTATION OF LOWER LIMB	3.3	819	1.0	1,017	0.8	812	1.2	750	0.3	689
RESIDUAL	3.1	146	0.9	193	0.9	154	0.9	134	0.4	100

SEE FOOTNOTES AT END OF TABLE

TABLE 8 (CONTINUED)

NUMBER OF DISCHARGES WITH SURGERY WHO DIED AND MORTALITY RATE PER 10,000 PROCEDURES, FOR AGED MEDICARE BENEFICIARIES DISCHARGED FROM SHORT-STAY HOSPITALS, BY SURGICAL PROCEDURE AND CENSUS REGION: 1983

SURGICAL PROCEDURE 1/	ALL REGIONS 2/		NORTHEAST		NORTH CENTRAL		SOUTH		WEST	
	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES	NUMBER OF DEATHS IN THOUSANDS	RATE PER 10,000 PROCEDURES
OPERATIONS ON THE INTEGUMENTARY SYSTEM	3.3	202	1.2	310	0.9	198	0.9	154	0.3	146
MASTECTOMY	0.1	37	0.1	56	3/	35	3/	18	3/	47
RESIDUAL	3.2	248	1.2	386	0.8	248	0.9	184	0.3	185
MISCELLANEOUS DIAGNOSTIC AND THERAPEUTIC PROCEDURES	17.4	737	6.8	932	3.7	699	5.3	632	1.6	611
ARTERIOGRAPHY USING CONTRAST MATERIAL	0.8	246	0.2	326	0.2	231	0.3	250	0.1	194
RESIDUAL	16.6	816	6.7	974	3.4	806	4.9	702	1.5	713
CODES UNKNOWN	7.9	484	0.8	518	5.2	556	1.5	372	0.4	297

1/ THE CLASSIFICATION CODES FOR THE LEADING SURGICAL PROCEDURES SHOWN IN THIS REPORT WERE DERIVED FROM THE INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION AND ARE PRESENTED IN ATTACHMENT 1.
2/ INCLUDES PUERTO RICO, VIRGIN ISLANDS, GUAM, AMERICAN SOMOA, AND FOREIGN COUNTRIES NOT SHOWN SEPERATELY.
3/ MORE THAN 0 BUT LESS THAN 50 DISCHARGES.

ATTACHMENT 1

DESCRIPTION OF THE MAJOR SURGICAL CLASSIFICATIONS AND THE 25 LEADING SURGICAL PROCEDURES: 1983

DESCRIPTION	ICD-9-CM CODE 1/
OPERATIONS ON THE NERVOUS SYSTEM	01.0 - 05.9
OPERATIONS ON THE ENDOCRINE SYSTEM	06.0 - 07.9
OPERATIONS ON THE EYE	08.0 - 16.9
INTRACAPSULAR EXTRACTION OF LENS	13.1
OTHER EXTRACAPSULAR EXTRACTION OF LENS	13.5
INSERTION OF PROSTHETIC LENS (PSEUDOPHAKOS)	13.7
OPERATIONS ON THE EAR	18.0 - 20.9
OPERATIONS ON THE NOSE, MOUTH AND PHARYNX	21.0 - 29.9
OPERATIONS ON THE RESPIRATORY SYSTEM	30.0 - 34.9
DIAGNOSTIC PROCEDURES ON LUNG AND BRONCHUS	33.2
OPERATIONS ON THE CARDIOVASCULAR SYSTEM	35.0 - 39.9
BYPASS ANASTOMOSIS FOR HEART REVASCULARIZATION	36.1
DIAGNOSTIC PROCEDURES ON HEART AND PERICARDIUM	37.2
INSERTION OF CARDIAC PACEMAKER SYSTEM	37.7
ENDARTERECTOMY	38.1
OTHER SHUNT OR VASCULAR BYPASS	39.2
OPERATIONS ON THE HEMIC AND LYMPHATIC SYSTEM	40.0 - 41.9
OPERATIONS ON THE DIGESTIVE SYSTEM	42.0 - 54.9
DIAGNOSTIC PROCEDURES ON STOMACH	44.1
DIAGNOSTIC PROCEDURES ON SMALL INTESTINE	45.1
DIAGNOSTIC PROCEDURES ON OTHER INTESTINE	45.2
PARTIAL EXCISION OF LARGE INTESTINE	45.7
CHOLECYSTECTOMY	51.2
UNILATERAL REPAIR OF INGUINAL HERNIA	53.0

SEE FOOTNOTE AT END OF TABLE

ATTACHMENT 1 (CONTINUED)

DESCRIPTION OF THE MAJOR SURGICAL CLASSIFICATIONS AND THE 26 LEADING SURGICAL PROCEDURES: 1983

DESCRIPTION	ICD-9-CM CODE 1/
OPERATIONS ON THE URINARY SYSTEM	55.0 - 59.9
DIAGNOSTIC PROCEDURES ON BLADDER	57.3
TRANSURETHRAL EXCISION OR DESTRUCTION OF BLADDER TISSUE	57.4
OPERATIONS ON THE MALE GENITAL ORGANS	60.0 - 64.9
TRANSURETHRAL PROSTATECTOMY	60.2
OPERATIONS ON THE FEMALE GENITAL ORGANS	65.0 - 71.9
OBSTETRICAL PROCEDURES	72.0 - 75.9
OPERATIONS ON THE MUSCULOSKELETAL SYSTEM	76.0 - 84.9
OPEN REDUCTION OF FRACTURE WITH INTERNAL FIXATION	79.3
ARTHROPLASTY OF KNEE AND ANKLE	81.4
TOTAL HIP REPLACEMENT	81.5
OTHER ARTHROPLASTY OF HIP	81.6
AMPUTATION OF LOWER LIMB	84.1
OPERATIONS ON THE INTEGUMENTARY SYSTEM	85.0 - 86.9
MASTECTOMY	85.4
MISCELLANEOUS DIAGNOSTIC AND THERAPEUTIC PROCEDURES	87.0 - 99.9
ARTERIOGRAPHY USING CONTRAST MATERIAL	88.4

1/ INTERNATIONAL CLASSIFICATION OF DISEASES, 9TH REVISION, CLINICAL MODIFICATION (VOLUME 3).

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Definition of Terms

Short-stay hospital: General and special hospitals certified as participating facilities under Medicare and reporting average stays of less than 30 days.

Discharge: The formal release of an inpatient from a hospital. All discharges including those persons who died during their hospitalization are included.

Hospital charges: The hospital's charges for room, board, and ancillary services as recorded on the billing form (HCFA 1453).

Surgery: Includes any operative procedures recorded on the patient's billing form defined as surgery in the International Classification of Diseases, 9th Revision, Clinical Modification (Volume 3). This includes procedures involving incision, excision, amputation, introduction, endoscopy, repair, destruction, suture, or manipulation.

Annual surgical rate per 1,000 enrollees: A ratio of the total number of discharges with inpatient surgery (multiplied by 1,000) to the number of persons entitled to benefits as of July 1 of that year.

Mortality rate per 10,000 discharges: A ratio of the total number of discharges with inpatient surgery who died in the hospital (multiplied by 10,000) to the total number of discharges with inpatient surgery.

Sources and Limitations of Data

The data shown in this report were derived from the Health Care Financing Administration (HCFA) short-stay hospital inpatient stay record file. This file is generated by linking information from three HCFA master program files. The statistical stay record, thereby, provides information on the patient, the hospital, and the hospitalization.

The data are based on short-stay hospital stay records contained in the 20-percent inpatient stay record file. Therefore, the data are subject to sampling variability. Sample counts were multiplied by a factor of 5 to estimate population totals.

The surgical procedure information recorded on the sample discharge records used to prepare this report were coded based on the International Classification of Diseases, 9th Revision, Clinical Modification (Volume 3). Two, three, or four digit codes were assigned for the principal surgical procedure of each sample bill record.